Amendments to the Claims

This listing of claim will replace all prior versions and listings of claim in the application.

1.   (Currently Amended) A system for defining and managing an asset, comprising:

a data store for virtual area data provided on a computer coupled to a network, the virtual area data representing a portion of a three dimensional space for a project as a two dimensional hierarchical project structure; and

a data input and supplement toolset linking virtual area data to business objects.

2.   (Currently Amended) The system of claim 1 wherein the virtual area data comprises data arranged in a hierarchical data structure representing three-dimensional physical space and is assigned a function.

3.   (Original) The system of claim 2 wherein the virtual area data is linked to item specification data values comprising an item specification provided in a plurality of data fields describing the item.

4.   (Original) The system of claim 3 wherein said item specification data includes:

at least one attribute value;

at least one component value; and

at least one allocation value.

5.   (Currently Amended) The system of claim 2 wherein the data input and supplement toolset comprises a computer aided design (CAD) software plug-in, the virtual area defined in a graphical format able to be processed and displayed in a user interface by CAD software.

6.   (Original) The system of claim 2 wherein the data input and supplement toolset comprises an item specification creation and editing tool.

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7.   (Original) The system of claim 1 wherein the data input and supplement toolset includes an item procurement toolset.

8.   (Original) The system of claim 7 wherein the item procurement toolset includes a bid tool.

9.   (Original) The system of claim 7 wherein the item procurement toolset includes a request for quotation tool.

10.   (Original) The system of claim 1 wherein the data modification toolset includes a cost management toolset.

11.   (Original) The system of claim 10 wherein the data input and supplement toolset includes an estimate tool.

12.   (Original) The system of claim 10 wherein the data input and supplement toolset includes an invoice tool.

13.   (Original) The system of claim 10 wherein the data input and supplement toolset includes a budget tool.

14.   (Original) The system of claim 10 wherein the data input and supplement toolset includes a payment tool.

15.   (Original) The system of claim 10 wherein the data input and supplement toolset includes an contract tool.

16.   (Original) The system of claim 1 wherein the data input and supplement toolset includes a teamwork toolset.

17.   (Original) The system of claim 16 wherein the project teamwork toolset includes a collaboration tool.

18.   (Original) The system of claim 16 wherein the project teamwork toolset includes a message center.

19.   (Original) The system of claim 16 wherein the project teamwork toolset includes a request for information tool.

20.   (Original) The system of claim 1 wherein the project includes a design phase, a modification phase and a procurement phase, and data is entered and modified throughout each such phase.

21.   (Original) The system of claim 1 wherein the data store contains links to other data in the system such that a change to one item or component is propagated to all linked data.

22.   (Original) The system of claim 1 wherein the data input system includes a CAD software plug-in.

23.   (Currently Amended) The system of claim 1 wherein the data store is updated ~~in real time~~ such that information modified by users is instantly available to other users in the system.

24.   (Original) The system of claim 1 further including an order fulfillment tool.

25.   (Withdrawn) A system for defining and managing a physical asset requiring a plurality of items and components, comprising:

a data store for virtual area data, including item attributes, for objects incorporated into or consumed during the creation of the asset;

at least one data creation toolset for virtual area data into the data store; and

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at least one item procurement system, the procurement system including a data store interface allowing supplementation of virtual area data.

26.   (Withdrawn) The system of claim 25 further including a cost management system including a data store interface allowing modification of virtual area data.

27.   (Withdrawn) The system of claim 25 further including a project management system including a data store interface allowing reference to virtual area data.

28.   (Withdrawn) The system of claim 25 further including an information collection system including a data store interface.

29.   (Withdrawn) The system of claim 25 wherein the procurement system includes a bidding tool.

30.   (Withdrawn) The system of claim 29 wherein data in the data store organized in the virtual area is linked to bidding tool.

31.   (Withdrawn) The system of claim 30 wherein data in the data store includes attributes and components exploitable by users in formulating and responding to bids.

32.   (Withdrawn) The system of claim 30 wherein the bidding tool modifies data and updates virtual areas used by other tools.

33.   (Withdrawn) The system of claim 25 wherein the procurement system includes a purchasing tool.

34.   (Withdrawn) The system of claim 33 wherein data in the data store organized in virtual area is linked to purchase tool.

35.   (Withdrawn)   The system of claim 34 wherein data in the data store includes attributes and components exploitable by users in formulating and responding to purchases.

36.   (Withdrawn) The system of claim 34 wherein the purchase tool modifies data and updates data linked to virtual areas used by other tools.

37.   (Withdrawn) The system of claim 34 wherein the purchase tool includes a purchase rule set, including a default rule set and a user-defined business rule set.

38.   (Withdrawn) The system of claim 34 wherein said system further includes a virtual area definition application, and said purchase tool interfaces with said virtual areas during a bid process.

39.   (Withdrawn)   A system for defining and managing a physical asset requiring a plurality of items and components, comprising:

a data store for virtual area data, including item attributes, for objects incorporated into or consumed during the creation of the asset;

at least one data creation system for virtual area data into the data store; and

a cost management system including a data store interface allowing supplementing of virtual area data.

40.   (Withdrawn) The system of claim 39 wherein the cost management system includes an estimate tool.

41.   (Withdrawn) The system of claim 40 wherein said system further includes a virtual area definition application, and said estimate tool incorporates virtual area classifications and virtual area data.

42.   (Withdrawn) The system of claim 40 wherein said estimate tool allows assignment of project codes to estimate items which can be rolled into a budget.

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43.   (Withdrawn) The system of claim 40 wherein said estimate tool includes an estimate roll-up tool.

44.   (Withdrawn) The system of claim 39 wherein the cost management system includes a budgeting tool.

45.   (Withdrawn) The system of claim 44 wherein said budget tool incorporates links to transactions with virtual areas.

46.   (Withdrawn) The system of claim 44 wherein said budget tool incorporates links to transactions with item purchase orders.

47.   (Withdrawn) The system of claim 44 wherein said budget tool incorporates transaction documents and defines documents based on default and user-defined business rules.

48.   (Withdrawn) The system of claim 44 wherein said system further includes a virtual area definition application, and said budget tool interfaces with said virtual areas to allow categorization of budget items by virtual area.

49.   (Withdrawn) The system of claim 39 wherein the cost management system includes a contract tool.

50.   (Withdrawn) The system of claim 49 wherein said contract tool is linked to a bidding tool.

51.   (Withdrawn) The system of claim 49 wherein said system further includes a virtual area definition application, and said contract tool is linked to said virtual areas.

52.   (Withdrawn) The system of claim 49 wherein modifications made by the contract tool update virtual areas used by other toolsets.

53.   (Withdrawn) The system of claim 52 wherein the contract tool includes a set of default and user-defined business rules.

54.   (Withdrawn) The system of claim 39 wherein the cost management system includes an application for payment tool.

55.   (Withdrawn) The system of claim 39 wherein the cost management system includes an invoice tool.

56.   (Withdrawn) A system for defining and managing a physical asset requiring a plurality of items and components, comprising:

a data store for virtual area data, including item attributes, for objects incorporated into or consumed during the creation of the asset;

at least one data creation system for virtual area data into the data store; and

a teamwork system including a data store interface.

57.   (Withdrawn) The system of claim 56 further including at least one item procurement system, the procurement system including a data store interface allowing modification of virtual area data.

58.   (Withdrawn) The system of claim 56 further including a cost management system including a data store interface allowing modification of virtual area data.

59.   (Withdrawn) The system of claim 56 further including a project management system including a data store interface allowing reference to virtual area data.

60. (Withdrawn) A system for defining and managing a physical asset requiring a plurality of items and components, comprising:

a data store for virtual area data, including item attributes, for objects incorporated into or consumed during the creation of the asset;

at least one data creation system for virtual area data into the data store; and

a project management system including a data store interface allowing supplement to virtual area data.

61. (Withdrawn) The system of claim 60 further including at least one item procurement system, the procurement system including a data store interface allowing modification of virtual area data.

62. (Withdrawn) The system of claim 60 further including a cost management system including a data store interface allowing modification of virtual area data.

63. (Withdrawn) The system of claim 60 further including an information collection system including a data store interface.

64. (Withdrawn) The system of claim 33 wherein the project management system includes multiple projects.

65. (Withdrawn) The system of claim 60 wherein the data store stores object data by project.

66. (Withdrawn) A method for constructing data concerning item specifications of an asset, comprising:

providing a user data entry interface;

receiving a plurality of data values, each into a data field of the interface, wherein the plurality of data fields comprise a specification for the item and each data field of the specification describes an attribute of the item, and

associating the specification with a virtual area.

67.   (Withdrawn) The method of claim 66 wherein said step of providing occurs on a first computer and said step of receiving occurs on a second computer.

68.   (Withdrawn) The method of claim 67 wherein said first and second computers are coupled by a network.

69.   (Withdrawn) The method of claim 68 wherein said network is the Internet.

70.   (Withdrawn) A system for project management, comprising:

a component virtual area data store including component object data;

a project management application server including a virtual area input system, having a virtual area definition tool

71.   (Withdrawn) The system of claim 70 wherein the virtual area definition tool defines a virtual area as a collection of components and items.

72.   (Withdrawn) The system of claim 70 wherein the virtual area comprises a spatial representation of an asset that can be used throughout the lifecycle of the asset.

73.   (Withdrawn) The system of claim 70 wherein the system further includes:

a data input tool;

an virtual area system;

a procurement system;

a cost management system;

a project management system.

74.   (Withdrawn) The system of claim 73 wherein said virtual area definition can be shared by said virtual area system, procurement system, cost management system, and project management s(Withdrawn) ystem.

75.   (Withdrawn) The system of claim 73 wherein said virtual area definition can be shared amongst users in a project.

76.   (Withdrawn) The system of claim 73 wherein said virtual area definition can be shared by multiple organizations.

77.   (Withdrawn) The system of claim 73 wherein said virtual area provides a plurality of work breakdown structures.

78.   (Withdrawn) The system of claim 77 wherein said work breakdown structure is a spatial representation of data.

79.   (Withdrawn) The system of claim 77 wherein said work breakdown structure is a project viewpoint.